California Energy Commission

Greenhouse Gas Emission Reduction Goals in the Electricity Sector

Assembly Utilities and Commerce Committee
March 10, 2008

Pat Perez
Assistant Director – Climate Change Initiatives
California Energy Commission

Energy Strategies for Reducing GHG Emissions

- 2007 Integrated Energy Policy Report adopted December 2007

  - Places GHG reductions prominently in the Energy Commission's Energy Agenda

  - Identifies specific strategies to meet state's energy needs and reduce GHG emissions

  - Concludes that California electricity sector can meet its share of AB 32's targets

Energy Strategies for Reducing GHG Emissions

- Increase energy efficiency through standards and utility incentives

- 33 percent of power from renewable resources by 2020

- New and improved distribution infrastructure is needed for reliability and also to support technologies such as distributed renewables and demand response
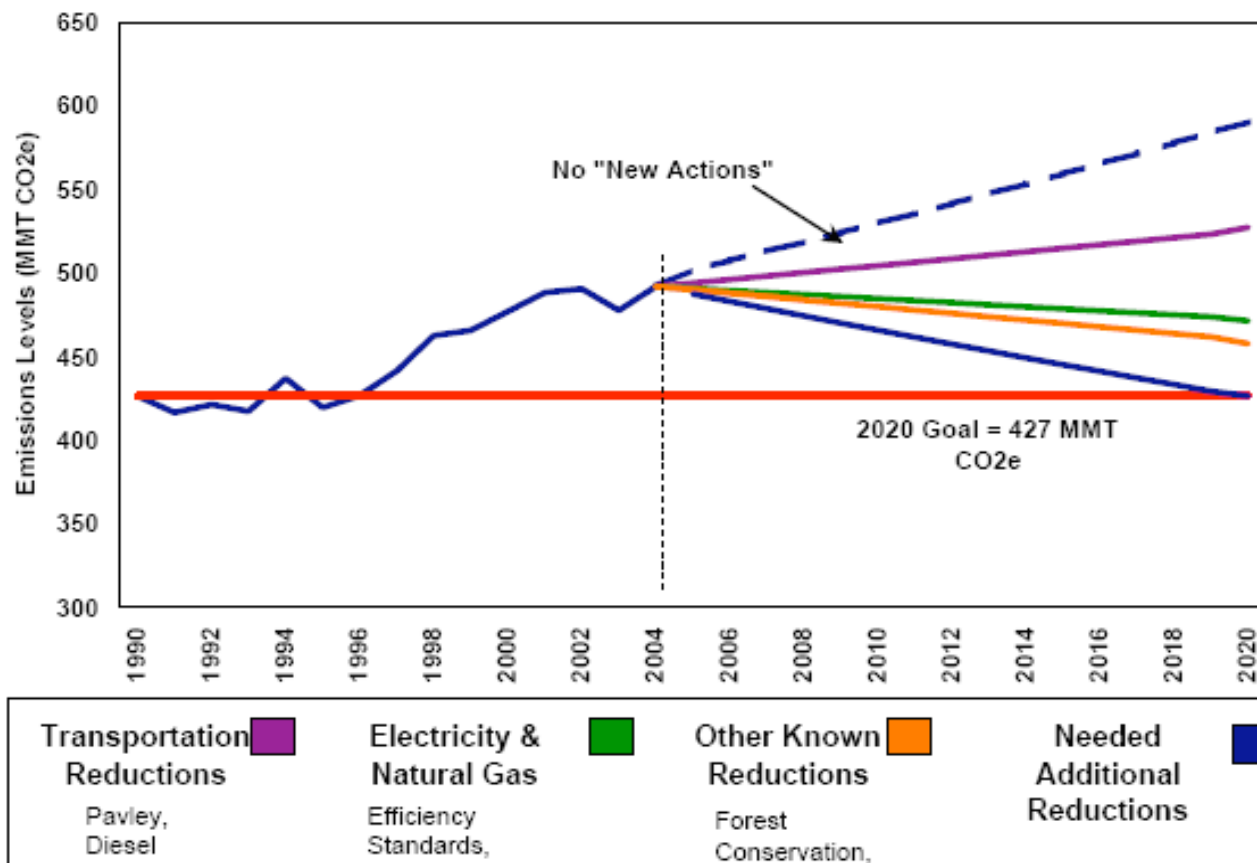
Energy Strategies for Reducing GHG Emissions

- Energy efficiency and renewable energy are essential for meeting AB 32 goals:

  – It is feasible to achieve 100% cost – effective energy efficiency through a combination of building and appliance standards, traditional utility programs, and new strategies and technologies delivered through local governments, community organizations, and the private sector

  –The 33% renewables by 2020 target is achievable with focused and coordinated support. Changes are needed to:

  - Streamline planning and permitting processes
  - Expand and upgrade the transmission grid and distribution system
  - Redesign the market price referent system – move to expanded use of feed-in tariffs (fixed price)

California's CO_2 Emission Reduction Strategies

Source: California Energy Commission, Climate Action Team data

Energy Strategies for Reducing GHG Emissions

- – Joint proceeding with CPUC to develop GHG reduction guidelines for the electricity sector
  - In 2007, CARB adopted mandatory reporting guidelines and 1990 emissions baseline based on recommendations from the CEC & CPUC
  - In 2008, CEC & CPUC recommending to CARB electricity and natural gas program design

- – Joint proceeding with CPUC on interim GHG policy decision recommendations to CARB

  - Quantify emissions reductions at what cost and impact on electricity provider (2nd phase)
  - Decisions in March and August
    - – March decision recommends mix of program measures and markets, point of regulation and allocation principles. Approach will achieve real GHG reductions at least cost to California consumers
    - – August decision will address allocation of costs and benefits, ratepayer costs, and cost effectiveness of measures
  - CARB adoption of Scoping Plan – November 2008

Energy Strategies for Reducing GHG Emissions

– Working on Western Climate Initiative working groups to design regional cap-and-trade program by August 2008

– Staffing and participating in 11 CalEPA Climate Action Team subgroups
  - Chair for Land Use and Local Government Subgroup

Energy Strategies for Reducing GHG Emissions

Standards:

- Building Energy Efficiency Standards
  - 2005 standards went into effect in late 2005
  - Adoption of 2008 standards expected in April 2008
  - AB 1560 clarifies authority for water energy savings in building standards

- Appliance Energy Efficiency Standards
  - 2005 standards in effect in 2006-2008
  - New standards in progress:
    - New lighting standards in response to AB 1109
    - Will cover consumer electronics (televisions) and battery chargers
  - Federal preemption limits state authority
  - AB 662 directs the Energy Commission to include water efficiency and conservation standards in future appliance standards

Energy Strategies for Reducing GHG Emissions

– Municipal Utility Programs (Portfolio of energy efficiency, renewables, combined heat and power and carbon reduction)

  • Statewide energy efficiency goals have been adopted (AB 2021)

  • Established GHG emission performance standard for baseload generation (SB 1368) for municipal utilities and load serving entities

Energy Strategies for Reducing GHG Emissions

– Developing Climate Research, Development, Demonstration and Deployment Roadmap

  • Draft interagency report to be released summer of 2008

– Bioenergy Action Plan Implementation

  • Biomass for electricity generation - the State shall meet a 20% target for use and production of biopower within established State goals for renewable generation for 2010 and 2020

– Participating in CARB Scoping Plan Process and Development

Questions